

Lecture 3 - In Class Exercise

Goal: Begin to understand the many facets of the testing process. Note, this activity may feel “fuzzy” but gives a good insight into the skills we will build up this semester.

1 Model for Testing

Instructions: Work with your neighbors in groups of 2

Consider testing a system which is supposed to implement the following constraints:

If the light is red and the valve is open, release the monster.

If the valve is open and the switch is on, release the monster.

1. From a practical perspective, what don't you want to have happen while you are testing this system? What is a standard way to avoid this problem?
2. What, exactly, do these constraints mean? In other words, formalize the problem. There are multiple possible answers.
3. How many different cases are possible, and what is the outcome in each case? There are multiple possible answers: choose the simplest.
4. Model what could go wrong. There are multiple possible answers.
5. How many different cases do you want to test? Justify your choices.